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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/027,922	12/21/2001	Nghia H. Chiem	CVZ-003	9904
959	7590	06/16/2004	EXAMINER	
LAHIVE & COCKFIELD, LLP. 28 STATE STREET BOSTON, MA 02109			SRIVASTAVA, KAILASH C	
			ART UNIT	PAPER NUMBER
			1651	

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/027,922	CHIEM ET AL.	
	Examiner	Art Unit	
	Dr. Kailash C. Srivastava	1651	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 10-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicants' amendment filed 04/03/2004 is acknowledged and entered. The text of those sections of Title 35 U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1-8 and 10-43 are pending and are examined on merits.

Claim Rejections - 35 U.S.C. § 112

3. Claims 1-8 and 10-42 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- At line 13 of the amended claim 1, the limitation "chromatography step" is recited. There is insufficient antecedent basis for this limitation in the claim because the preceding step at lines 8-9 from which the step recited at Line 13 follows recites the limitation "separating".
- Claim 10 is rendered vague and indefinite because it is dependent on cancelled claim 9. Appropriate dependency correction is required.

Claims 2-8 and 10-42 depend directly from rejected claim 1 and are, therefore, also rejected under 35 U.S.C. §112, second paragraph for the reasons set forth above.

Claim Rejections Under 35 U.S.C. § 103(a)

4. Claims 1-8 and 10-43 stand rejected under 35 U.S.C. § 103 (a) as obvious over Dennis et al. (U.S. Patent 5,501,957) in view of Parce et al (U.S. Patent 5,942,443) and Ma et al. (Analytical Chemistry, 2000. Volume 72, Pages 3383-3387).

In response to the rejection in the Office Action dated October 2, 2003, applicants argue that the claimed invention is unobvious over the cited reference, because the cited references do not disclose or suggest, or provide motivation to arrive at the presently claimed invention. Applicants further argue that the instantly claimed invention is unobvious over Examiner's cited references because "the mere fact that a combination of three references is proffered, the claimed analytical method within a microfluidic device" does not become obvious to one skilled in the art.

Applicants' arguments have been fully considered but are not persuasive for the reasons of record at item 11, pages 4-5 of the Office Action cited *supra* and for the reasons discussed below. Dennis et al. teach a two substrate, two-enzyme assay method wherein the enzyme (i.e., the first glycosyl transferase) reacts with a donor sugar and an acceptor substrate to form an enzyme-catalyzed (i.e., the first glycosyl transferase) product. Subsequently, said product is the substrate for another enzyme, said second enzyme (i.e., the second glycosyl transferase) reacts with a labeled donor sugar material (second compound) and as a result of latter reaction, a labeled enzyme product is produced. Thus, Dennis et al. teach a reaction, wherein at least two substrates and one enzyme react to produce a product or two enzymes (i.e., the two transferases) react with at least one substrate (the sugar) to produce a product. Parse et al., substantiate teachings of Dennis et al., because Parse et al. teach assaying the activity (i.e., effects) on different substrates with one enzyme in a microfluidic device comprising multiple channels (See Figure 8) and Ma et al. remedy the deficiency of combinatorial screening using 96 capillary array electrophoresis in teachings from Dennis et al. Furthermore, even if the combined teachings from Dennis et al., Parse et al., and Ma et al., do not make the instantly claimed invention obvious

merely because it is an “analytical method in a microfluidic device”, the claimed invention is obvious over the cited art because selection of size, microfluidic, is a mere design choice and lends no patentability (See M.P.E. § 2144.04A). Therefore, instantly claimed invention is patentably obvious under 35 U.S.C. § 103 (a).

In response to applicants’ argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) And *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, those reasons are cited at pages 4-5 of the Office Action cited *supra* and for the reasons discussed in preceding paragraph. Furthermore, a rejection under 35 U.S.C. § 103 (a) based upon the combination of references is not deficient solely because the references are combined based upon a reason or technical consideration which is different from that which resulted in the claimed invention (*Ex parte Raychem Corp*, 17 U.S.P.Q. 2d 1417).

CONCLUSION

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. No Claims are allowed.

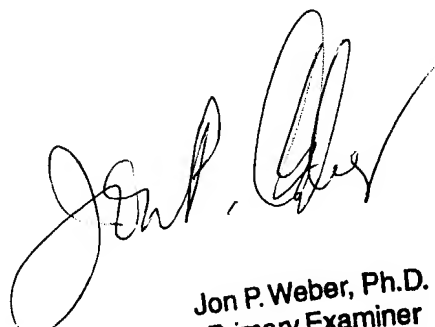
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kailash C. Srivastava whose telephone number is (571) 272-0923. The examiner can normally be reached on Monday to Thursday from 7:30 A.M. to 6:00 P.M. (Eastern Standard or Daylight Savings Time).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Wityshyn, can be reached on (703) 308-4743 Monday through Thursday. The fax phone number for the organization where this application or proceeding is assigned is (703)-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Kailash C. Srivastava, Ph.D.
Patent Examiner
Art Unit 1651
(571) 272-0923

June 14, 2004



Jon P. Weber, Ph.D.
Primary Examiner